December 19, 2002

Bill Pennington
Bryan Alcorn

California Energy Commission
1516 Ninth Street
Sacramento, CA 95814-5512

RE: Comments to November 2002 Draft *2005 Energy ACM Manual* and *2005 Energy Efficiency Standards*

Dear Sirs:

These comments are submitted on behalf of the North American Insulation Manufacturers Association (NAIMA) the trade association that represents the manufacturers of fiber glass, rock and slag wool. Thank you for the opportunity to comment on the *ACM Manual* and the *Energy Efficiency Standards* during the November 5 workshop. Following is a summary of those public comments and some additional issues that were not included in my public testimony:

1. Quality Issue - NAIMA would like to commend the CEC on its handling of the "quality of wall and attic insulation" issues in the draft standards by providing a credit for insulation that is properly installed and verified – as opposed to assuming substandard installation as the standard case.
2. Insulation Protocol - NAIMA would also complement the Commission on the development of the *High Quality Insulation Installation Procedures* document (ACM RQ-2005). This document has come a long way toward being a useful tool for the inspection of insulation.
    - We maintain that the procedures should expressly permit batt products to be installed using the "side-stapling" method. NAIMA has submitted laboratory tests that demonstrate fiber glass batt products perform equally when side or face stapled. We respectfully request that the commission what testing would be sufficient to substantiate the practice of "side-stapling" and give us the opportunity to provide other information if needed.
    - The procedures should address all insulation materials permitted by Title 24 including cellulose and radiant barriers. These products are subject to similar installation concerns - if not more so. NAIMA has included a CD-ROM that presents the results of fire tests that were performed on 2 radiant barrier products that show possible hazards when these materials are installed exposed in buildings. Also, HUD did a field evaluation that included radiant barrier products, which shows simple paybacks of between 22 and 59 years for retrofit cases. We have enclosed a copy of this report and a color PDF version can be downloaded at http://www.toolbase.org/tertiaryT.asp?DocumentID=3567&CategoryID=1092

- All density measurements on materials that are installed using water should be done on substantially dry materials. Using moisture meter readings cannot provide accurate densities because the moisture will vary greatly throughout the material until it is dry or has a stable moisture content. Furthermore, the equation for calculating the sample weight, on page 4 of the ACM RQ-2005 should be verified with field testing before allowing this method. We do not believe this equation will yield accurate results due to the variability of the moisture content in the materials.

3. Duct Insulation –
   - NAIMA is supportive of the Commission's approach to its "R-8" duct insulation proposal. We believe this will encourage the market to move to R-8 duct insulation levels without fixing it as a mandatory requirement.
   - It has come to our attention that the Commission is considering a proposal that would allow ducts in attics to be insulated by burying them in loose-fill insulation. Although NAIMA would likely benefit from this practice, we strongly advise the Commission not to allow this practice without exhaustive field testing. This practice could reduce the surface temperature of the outer layer of ducts to less than the dew point of the ambient air – resulting in condensation and possible mold problems. I have reviewed the technical support document used to substantiate this practice and found it lacking regarding condensation issues.
4. Minor Issues/Typos –
   - On page 1 of the ACM RQ-2005, The definition of draft stop states that mineral fiber insulation cannot serve as a draft stop when it would be better to say "porous insulation materials that allow air to pass through them" – Or something to that effect.
   - On page 4 of the ACM RQ-2005, the third bullet states that "as much insulation as possible shall be placed behind the pipe" We recommend clarifying this by changing it to read, "as much insulation as possible (without densely packing) shall be placed behind the pipe,…"
   - On page 4 of the ACM RQ-2005, the fifth line of the last contains bullet contains the word form and it should be from.

Thank you again for the opportunity to comment on these issues. If you have any questions or comments, please do not hesitate to contact me at 703 684-0084.

Sincerely,

Charles C. Cottrell
Director, Technical Services

Enclosures

Mr. Bill Pennington
Mr. Bryan Alcorn

BCC: AIR HANDLING COMMITTEE

GLEN BROWER	KELLY ERDMANN
RICARDO GAMBOA	BOB GARDNER
DICK GEBHART	GEORGE HENRY
DAVE LOVICH	GREG MATTIX
TOM PONDER	ERIC SCHAKEL
MARK SMITH	CLIFF SMITH
JIM WORDEN	

BUILDING INSULATION COMMITTEE

JEFF BRISLEY	SCOTT DESHETLER
BOB GARDNER	STAN GATLAND
TIM GRETHER	JEFF HIRE
DAVE LOVICH	JOHN MUMAW
ERIC NILSSON	STEVE VOLENEC
DAVE WARE	BILL EDMUNDS
JAY MURDOCH	TOM NEWTON

NAIMA STAFF

ROBIN BECTEL	KEN MENTZER
GEORGE PHELPS	MATT WALD